

# Perceptions of Multigrade Teaching: A Narrative Inquiry into the Voices of Stakeholders in Multigrade Contexts in Rural Zambia

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## Abstract

Multigrade teaching is used widely in primary schools throughout the Majority World. This study reports the findings of a narrative inquiry undertaken to answer the question: what are the perceptions of stakeholders in rural Zambian multigrade contexts about multigrade teaching as an education strategy? We were interested in exploring the reality of multigrade education. The inquiry found that although stakeholders in the main held positive perceptions about multigrade teaching, necessitated by lack of resources in rural areas, they saw it as a poor substitute for monograde teaching. The study confirms that the human and physical infrastructure in rural Zambia is in a poor state making unlikely the achievement of MDGs by 2015. Capacity building to enhance multigrade education is suggested as a possible strategy to accelerate the realisation of the MDG of Education for All (EFA) by 2015. Failure to provide effective multigrade teaching will commit millions of children, particularly in the rural areas in the Majority World, to the vicious cycle of extreme poverty, unemployment, hunger, ignorance and disease.

**Keywords:** multigrade pedagogy, millennium development goals, access to education in rural areas, primary education in rural areas, pre-service teacher education, narrative inquiry, majority world, minority world

## 1. Introduction

This paper reports on perceptions of multigrade education of teacher educators in Zambia, along with perceptions of teachers, student teachers, principals and families involved with multigrade schooling. We first examine the different underpinning approaches to multigrade teaching (a philosophical commitment versus a practical action) and the research that investigates these approaches, and then discuss the perceptions of a wide range of stakeholders involved in multigrade education.

## 2. Literature Review

In Minority World countries (also called western, rich, developed countries) education commonly occurs in monograde classrooms, underpinned by an assumption that children of similar ages are likely to need similar learning opportunities to acquire the knowledge and skills expected of children of their age. In this context, grouping children across the age span can be considered to be a less effective approach to teaching and learning: a “poor relation” (Beukes, 2006, p. 23) in school organisation. In contrast, in the Majority World (also called eastern, southern, poor, under developed countries) most children, especially in rural and remote areas, receive education in multigrade contexts. These contexts include what are also characterised as “multilevel”, “multiple class”, “composite class”, “vertical group” and “family classes” (Little, 1994). They are sometimes referred to as “double stream classes”, “split grade classes”, “combination classes”, or “mixed year” classes (Veenman, 1995). In India, for instance, in a multi-level context where children of different learning abilities from grade 1 through to grade 5 are taught in one classroom, Padmanabha and Rama (2010, pp. 4-5) have referred to them as “multi-grade, multi-level, integrated”. A common denominator shared by the different types of multigrade classes is that children who fall into different age brackets are taught by one teacher, in one class at the same time.

There also appears to be a difference in the rationale underpinning the use of multigrade classes. As Veenman (1995), as well as Mason and Burns (1997) explain, in the Majority World, multigrade classes have been used out of necessity created by too many children relative to teachers available, (that is, lack of teachers at the school

to provide a teacher for each grade), even though student numbers are not large, or in situations where there is uneven pupil intake. In contrast, in the Minority World, whilst multi-grading is sometimes used to combine children in different grades for practical reasons as above, it has also sometimes been used as a deliberate pedagogical choice. In this latter case, children are graded on the basis of specific attributes rather than student numbers or student: teacher ratios. Multi-age groups are formed by choice, when school communities believe that educating children of different age groups together is beneficial. In such groups, teachers tend not to assume that students' learning is based on their age or grade level, and learning opportunities are shaped around individual student's needs.

Irrespective of the rationale for the formation of multigrade classes, there is evidence showing that a large number of primary school children learn in multigrade classes in both the Majority World and Minority World. For example, Little (2006b) and UNESCO (2007) showed that in 2005, some 30% of children worldwide were in multigrade schools. Multigrade classes are found in many Minority World countries including USA, UK, Canada, Norway, Australia, Germany, Greece, Russia, Finland, France, and Ireland and in numerous Majority World countries such as China, India, Vietnam, Bhutan, Nepal, Bangladesh, Sri Lanka and several countries on the South American sub-continent such as Peru, Colombia and Brazil. Vithanapathirana (2005) estimated that 20% of all schools in Sri Lanka had multigrade classes. In India, the finding by Little (2006a) in 1996 that 84% of primary schools had no more than three teachers at most implies that each teacher taught several grades of learners. In England, Little (2006a, p. 33) found that "a quarter of all learners were studying in mixed-year classes" in 2000. For the same year she reported that "in France, 34% of public schools had combined classes". The figure was 35% of all primary schools in Norway in 2000. In Africa, multigrade classes are common in the west, central, eastern and southern parts of the continent as exemplified, for instance, in Zambia, Kenya, Uganda; Tanzania, Mali and South Africa. For example, in Burkina Faso in West Africa, Little (2006a, p. 33) found that "18% of school children were studying in multigrade classes" in 2000. In Peru, Little (2006a) reported that "in 1998, 78% of all public schools were multigrade" (p. 33).

In spite of data that show that a large number of primary school children learn in multigrade classes in both the Majority World and Minority World, there has been considerable debate around the perception that multigrade education is a less desirable educational strategy (Berry, 2010; Taole & Mncube, 2012). Research data are sparse but there is anecdotal evidence suggesting that in the Majority World where multigrade classes are predominant, particularly in the rural and remote areas, multigrade classes are good practice (Benveniste & McEwan, 2000) because they are practical; addressing the issues around size (many small rural schools do not have sufficient numbers of children to offer separate classrooms and teachers for each age group). In such contexts multigrade schooling is seen as a way to improve access of children to primary education and thus offer good value for money (Juvane, 2005). Given teachers in multigrade (and indeed in multi-age) classes need to focus on the learning needs of individual children rather than make assumptions based on age, multigrade schooling has the potential to improve the quality of teaching (Beukes, 2006; Juvane, 2005). Variation in the learning needs of children within a single age cohort can be significant, so it has been argued that training teachers for multigrade teaching creates opportunity for improvements in pedagogy which can benefit all children (Berry, no date; Blum & Diwan, 2007).

Contributions to this debate have included research conducted to identify and compare the impact of multigrade and monograde classrooms on children's achievement. For example, Little (2006a, p. 33) found that some children in multigrade schools in the Turks and Caicos Islands performed better in reading than those in monograde classes. However, evidence from meta-reviews of research on multigrade teaching are mixed, with some showing enhanced child academic outcomes, and others, no difference or worse outcomes (Little, 2004; Taole & Mncube, 2012). Beukes (2006) suggests that improved academic outcomes may be associated with "cognitive stretching" (p. 50) achieved when younger, less able students work with older, more able classmates. However, negative outcomes for students may be linked to the increased demands on teachers needing to cater for a wide range of student learning needs (Benveniste & McEwan, 2000). Higher levels of teacher stress resulting from increased demands on them are likely to reduce the quality of teaching (Mason & Burns, 1997). The impact of multigrade schooling on children's learning outcomes may well be linked to their underpinning rationale: where multigrade is offered as a deliberate pedagogical choice and is well resourced, outcomes may be better than when it is offered reluctantly, out of necessity and inadequately resourced.

Further contribution to this debate has been work undertaken to identify the components of successful multigrade instruction. For example, Miller (1991) argued that classroom organisation, classroom management, behaviour management strategies, instructional organisation and curriculum, teaching delivery and grouping, and the use of self-directed learning and peer tutoring were the key factors influencing successful multigrade teaching. Many of

these depend on the skills of the teacher, and more recent research has identified this as a key component contributing to successful implementation (e.g. Soliman & Ismail, 2010). Work in Colombia, where the Escuela Nueva programme emphasised the importance of multi-grading, focused on changing teacher practices and resources (Benveniste & McEwan, 2000). Self-study materials were provided in maths, Spanish, science and social studies. In-service training was offered to teachers to move them from traditional instructional techniques (such as lecturing, rote memorisation and hierarchical relationships with students) towards a constructivist approach to teaching and learning focusing on collaborative inquiry. Whilst these factors were found to have a small impact on teachers' practices, a more profound impact arose from teachers' attitudes (called "will" in the evaluation undertaken by Benveniste and McEwan). The authors argue that whilst teachers continue to perceive multigrade teaching as a poor alternative to monograde teaching they will remain unable to effectively implement the strategies they are taught.

Although it is the stated aim of the government of Zambia to eradicate illiteracy and to provide universal and equal access to education for all children (Education for All—EFA) of primary schooling age, many children in rural and remote areas where over 80% of the population live, do not have easy access to schools. Multigrade teaching was introduced to a number of primary schools in Zambia in the mid 1980s in a special project jointly supported by the Zambian Ministry of General Education and the Swedish International Development Authority. However, ministerial support did not provide a central curriculum for multigrade teaching (Lungwangwa, 1989; Mukupa, Ndhlovu, & Sichula, 2010). The Department of Education offers a curriculum for monograde primary classrooms only, thus teachers who find themselves teaching multigrade classes have to improvise. This improvisation is challenging because, as demonstrated in India, what is required is a curriculum that is designed to provide for the learning needs of students of all different ages and levels where there is no correlation between age and ability (Padmanabha & Rama, 2010). The situation is exacerbated by the fact that some rural parents, those who can afford to, send their children to monograde schools in Lusaka, Zambia's capital city and largest metropolitan area. As children migrate from rural to urban areas fewer children are left in the rural areas. As a result, the remaining children are aggregated into a single multigrade class consisting of an even greater range of grades, ages and abilities. Coupled with little opportunity for professional development and social networking in rural areas, these pressures result in an increasing reluctance of teachers to accept appointments in rural and remote areas.

Aware of the different approaches to the provision of education in the Majority World and Minority World reviewed above, this paper reports some of the findings from a multi-national, multigrade capacity building partnership. The team's earlier work suggested that, although many primary teachers in Zambian primary schools, particularly in rural areas, taught classes consisting of a large number of children of different ages and learning levels, none of the teachers involved were skilled in multigrade teaching (Kivunja & Maxwell, 2009). This paper focuses on perceptions of teacher educators, teachers, student teachers, and other stakeholders of multigrade education as a first step in a project aimed at enhancing capacity in multigrade education.

This paper reports on perceptions of multigrade education of teacher educators in Zambia, along with perceptions of teachers, student teachers, principals and families involved with multigrade schooling. We first examine the different underpinning approaches to multigrade teaching (a philosophical commitment versus a practical action) and the research that investigates these approaches, and then discuss the perceptions of a wide range of stakeholders involved in multigrade education.

### 3. Method

The key question investigated was: what are the perceptions of teacher educators, their students in a key teacher education institution in Zambia, (we refer to this institution as Zafunda to maintain anonymity), teachers in schools and other stakeholders about multigrade teaching? This study is based in the interpretive paradigm and a social constructivist (Williamson, 2006) epistemology. We argue that the participants construct their understandings of multigrade teaching from their own experiences and the perceptions of others around them. Given the identified ontology and epistemology of this study, we chose to use narrative inquiry (Hammersley, 1998; Hammersley & Atkinson, 2004) as our method. We chose this method of inquiry because our understanding of Zambian culture indicates that participants are most likely to feel comfortable with the concept of story-telling: of explaining their experiences and perceptions through narrative. In collecting the narratives, one of the researchers was embedded with the participants in the multigrade contexts for one month to build trust and to gain a better understanding of the experiences of the participants. The aim of this approach was to elicit participants' perceptions about multigrade teaching through narrative (Chase, 2005; Wahler & Castlebury, 2002) dialogue.

### 3.1 Participants

The study involved five groups of participants.

Group one consisted of teacher educators/lecturers from Zafunda. We invited all 39 staff involved in teacher education at Zafunda to participate in the study. Twelve agreed to participate in the study.

Group two comprised teachers working in multigrade schools in rural Zambia. We identified four primary schools offering multigrade education. Two were purposively chosen because they are government schools with a special relationship with the Zafunda teacher training programme. These schools are used as demonstration schools by Zafunda academics for multigrade teaching. This means that the teachers at these schools have been exposed to material on multigrade teaching offered by the teacher educators. The other two primary schools were selected because they are neighbouring non-government schools, thus providing an opportunity for comparison across the government and non-government sectors. All teachers of multigrade classes in these schools were invited to participate in the study and six out of the eighteen chose to do so.

Group three consisted of student teachers studying primary education at Zafunda. All 20 students who were currently enrolled in the multigrade education class at Zafunda were invited to participate in the study. All agreed to do so.

Group four involved principals of multigrade schools. All the four principals from the selected schools were asked to participate and 3 agreed to do so.

Group five consisted parents of children in multigrade classes. We sought to include parents and invited all parents whose children were attending multigrade classes in the selected schools to participate in the study and four agreed to do so.

### 3.2 Data Gathering

Ethics approval for the study was granted by the Australian University and Zafunda. Data were collected as follows.

#### 3.2.1 Observation of Teachers in Multigrade Classes

One researcher (from a similar cultural background to the participants) visited the multigrade classes run in 2 of the schools from which Group 2 participants were drawn. These two schools were the government schools affiliated with Zafunda and they were chosen for the observations because the teachers in these classes were used to having visitors and having their practice observed. It is in these classes that student teachers undertake observations of teaching practice. Two lessons were observed by the researcher, having been granted permission by the study participants concerned. These observations were used to inform conversations with participants so that the researcher was grounded in their experiences and reality.

#### 3.2.2 Interviews

Following the observations, participants were interviewed. Although the participants spoke freely, their responses were triggered by open-ended, semi-structured questions which targeted the research question and the key themes of the research, namely implementation of multigrade pedagogy and strategies by the teacher trainers, perceptions of the rationale for multigrade schooling, personal philosophy about multigrade, advantages and disadvantages of multigrade, teacher training strategies and resource availability for multigrade teaching. The audio-video digital recording of the interviews made it possible for the conversations to flow naturally and for the participants to express their voices freely and without interruption. The interviews were held outdoors to facilitate digital recording since many of the offices at the schools did not have adequate lighting. The lively nature of primary school environments often meant that the recording had to be done in a corner far away from the main play areas so that the interviews did not hinder children's play. Consent was sought and given by all participants to allow the use of their data for research purposes including the sharing of their audio-video digital stories via the world-wide-web in a study proposed for the future.

### 3.3 Analysis

The digital data were transcribed verbatim. Once in electronic format, the data were then analysed using *Leximancer* software. *Leximancer* (<http://info.leximancer.com/>) is a software tool that analyses text to identify themes and concepts through looking at word proximity. Leximancer was used to develop key themes from the concepts arising from the digital stories, using calculations of word proximity. The use of *Leximancer* enabled the researchers to investigate the relationships among the concepts deeply, and to develop a rich and thick description of the narratives within the five themes identified by *Leximancer*.

Implementation of multigrade pedagogy and strategies in primary teacher preparation,  
 Perceptions of the rationale for multigrade schools,  
 Stakeholders' personal philosophy of multigrade teaching and learning,  
 Advantages and disadvantages of multigrade classes,  
 Teacher training, strategies and resources available to multigrade teachers.

The results are presented below according to these themes.

#### 4. Results and Discussion

##### 4.1 Implementation of Multigrade Pedagogy and Strategies in Primary Teacher Preparation

Mukupa et al. (2010) report that Zafunda has put in place systematic structures to skill its academic staff in the teaching of multigrade pedagogy and strategies to the student teachers: of the 39 lecturers at Zafunda, 64% (20 males and 5 females) had attended in-house workshops on multigrade teaching strategies in the previous 12 months. However, only 28% of these had attended most of the workshops and 8% had attended only a few of the workshops. Despite this lack of preparation, 80% of all lecturers had participated in monitoring multigrade practice by the teacher trainees.

Participants in Group 1 reported that classes in multigrade pedagogy and teaching strategies were offered to student teachers once a week as an additional session scheduled outside the normal timetable. In the sessions, students were taught the concept of multigrade teaching, the history of multigrade schooling in Zambia, the importance of multigrade to Zambia's efforts to provide universal primary education (EFA) especially to children in the rural and remote areas, multigrade teaching strategies as well as measurement and evaluation. Students are also taught how to use locally available resources to make a wide range of teaching and learning aids and when and how to use them. Lecturers were unanimous in their call for more time to be allocated to the teaching of multigrade curriculum. Lecturer H said:

Multigrade is time tabled once a week and this is not enough. Putting an extra lesson after normal classes gives students the impression that it is optional and not all that important. We need more resources for multigrade and I think multigrade is very important but we do not have enough resourcing to teach it properly (Lecturer H).

Apart from the theoretical preparation of the student teachers, lecturers give their students practical skills in multigrade teaching in five ways:

- (1) Children from Basic School A, in a combined grade 3 and 4 class, walk to Zafunda where they are taught either by a lecturer or their regular teacher while being observed by the student teachers.
- (2) Student teachers walk to the primary school and observe lessons taught by the primary teacher.
- (3) Student teachers visit the primary school and teach the multigrade class observed by their lecturer and the regular class teacher.
- (4) All student teachers spend one semester on teaching practice in various schools. During that practicum the students are observed by one of their lecturers and their approach to multigrade teaching is monitored using a special instrument.
- (5) A recent innovation involved bussing thirty children from Basic School B to Zafunda where they were taught by one of the Zafunda teacher educators. The whole cohort of second year student teachers observed the lesson. Although the room was very crowded, the lesson gave student teachers the opportunity to observe another teacher, specially trained in multigrade at work and to ask her questions after the lesson.

One of the researchers observed two such lessons each of which was performed differently. In the first, 40 children of two grades from the nearby Basic School B were brought by bus to the college. Once there they were led into one large room created by folding away a collapsible partition. Grade 4 sat on the floor at the front of the class. Grade 5 sat at desks behind grade 4. The student teachers then came into the room and either sat on the desks at the back of the room or simply stood up around the room as there were not enough seats for everyone. A lecturer introduced the primary teacher who had come with the children and the students and explained the demonstration purpose of this lesson. He then handed over to the primary teacher who proceeded to teach the multigrade class. The primary teacher was one of the few teachers trained in multigrade teaching. The lesson was conducted for 60 minutes. After the lesson, the lecturer asked the student teachers questions about the strategies that had been used by the primary teacher. The students were also given the opportunity to ask questions and to make comments about the lesson.

In the second practical lesson observed, a group of 20 student teachers walked to Basic School A situated some 600 metres away from their campus. On reaching the primary school, the student teachers were led into a class

consisting of grade 3 and 4. The primary teacher then taught her multigrade class as a demonstration lesson. The lesson went for 40 minutes after which the student teachers returned to Zafunda.

Following such training in multigrade pedagogy and methods, the student teachers sit a special examination of 1.5 hours on multigrade approach to teaching. At the end of their training, they are given a certificate showing that they completed instruction in multigrade teaching methods. Commenting on this prospect Student Interviewee C said:

The training here will ensure that when I go to any school I will be able to teach multigrade well. The certificate shows that I am ready. This gives me advantage over those who are not multigrade trained. So when I go out, I can handle all class situations—multigrade and not multigrade (Student Interviewee C).

#### *4.2 Stakeholders' Perceptions of the Rationale for Multigrade Schooling*

All the three primary school principals and six primary teachers interviewed agreed that they were driven by pragmatic reasons in setting up multigrade classes in their schools: they had issues with student numbers and the number of teachers at the school. This was often explained as relating to too few students to warrant a monograde classroom or insufficient teachers to allow the allocation of a teacher to each individual grade. As a result, classes were combined and the multigrade classes formed had “far too many children per class” (Principal B). In contrast, at Basic School A where enrolments had increased significantly, multigrading had been abandoned except for one class of grade 3 and 4 which had 50 children.

These pragmatic reasons for the formation of multigrade classes in the Zambian schools studied are not unique to Zambian or other African countries. Rather, they are quite common world-wide wherever there is a low population density in a large geographic area: for example in regional Australia, very large expanses of land are occupied by a few farmers with very large farms. As a result, only a few children of primary schooling age live in these areas. Consequently, schools are very small and inevitably the children are taught in multigrade classes. Given the widespread perception that multigrade schooling is inferior, many of the farmers who can afford to send their children to monograde boarding schools in the major urban areas do so or alternatively, send them to live with their relatives near the monograde schools in the major cities. Multigrade schooling thus seems to be strongly positioned as an undesirable but necessary solution to low student and teacher numbers in rural and regional areas; a pragmatic strategy that is not used immediately it is possible for schools to offer single grade classes.

#### *4.3 Stakeholders' Philosophical Position on Multigrade Teaching and Learning*

The third theme in our data identified this philosophical positioning of multigrade education. All participants interviewed were of the view that the monograde classes were the expected practice in their schools and that multigrade was only a substitute in contexts which could not provide for the former. Parent A said:

Multigrade is forced upon us because of infrastructure. We don't have classrooms, we don't have desks, we don't have blackboards; even we don't have chalk. And we don't have teachers. So, to give our children a chance at being taught, many of them are put in one class and a teacher teaches them in a combined group. But this is not ideal. I think the government should do a lot more for these schools, and I think it is too hard on the teachers (Parent A).

In spite of the universal perception among interviewees that multigrade had been forced upon them by necessity rather than choice, there was a clear understanding that multigrade schooling was filling an important gap in the education of their children; in other words it provided an education that was better than nothing. In articulating this perception Primary School Principal A said:

Initially we had problems because parents were apprehensive about their children being in multigrade classes. Some felt their elder children were just repeating work. But now since they are seeing that their children in multigrade are doing very well, they like it. One of the reasons we have stopped multigrade in the other classes is because we now have too many kids to combine grades (Principal A).

One Parent, C, who had two children in a combined class, one in grade 3 and the other in grade, 4 said:

I think multigrade is very good here. My daughter in grade 3 and my son in grade 4 are in one class, and they are both doing very well. When they come home, they continue to work together; I think even the younger one is doing just as well as the boy. I think the government should train many more teachers for multigrade so that this type of school is used widely throughout Zambia (Parent C).

The interviews showed that teachers supported multigrade. For example Teacher D said: “My view is that multigrade can be good for us in rural areas, and we like it. The trouble is that our teachers are not trained for

multigrade teaching. This is the real problem." (Teacher D)

However, the unanimous perception among the interviewees was that it involved more work than monograde. This was well represented in the response by Teacher F who said:

When you teach multigrade, you do a lot of preparation. Ok; the children are in one room, but you have to prepare each level's lesson separately. So, it is a lot more work that the teacher does. (Teacher F)

Thus it appeared our participants all felt multigrade was a form of education imposed upon them because of practical limitations (low student numbers in rural areas and lack of teachers) rather than a philosophical choice of multigrade as a pedagogy.

#### 4.4 Stakeholders' Perceived Advantages and Disadvantages on Multigrade Classes

Despite this perception of multigrade as an undesirable choice, Principal B at Basic School A said that the quality of education received by children in multigrade classes was very good. He said: "I have results in the office which show that the children in the multigrade class are doing very, very well indeed." (Principal B) Table 1 provided by the Principal of Basic School A, shows that children in the multigrade class had performed better than those in monograde classes for three successive years.

Table 1. Comparison of children's academic results in monograde and multigrade classes at Basic School A

Year	Monograde			Multigrade		
	Number that attempted the test	PASS	% Pass	Number that attempted the test	PASS	% Pass
2007	41	32	78	15	14	93.3
2008	43	30	69.8	18	16	88.9
2009	45	35	77.8	20	19	95

Source: Data provided by Basic School A.

This finding was also evident at Basic School C where Parent B said: "In fact, my daughter who is in a multigrade class is doing better than my son who is in a monograde class" (Parent B). However, this perception was not unanimous. Two of the four parents said that students in multigrade classes were disadvantaged because they did not have fully qualified teachers. They saw this as one of the reasons why there was a high rate of drop-out from school. In spite of this perceived disadvantage, both parents saw the multigrade class as the only opportunity for providing education to children in the rural and remote areas where "one-room schools" and "one/two-teacher schools" are common and parents could not afford to send their children to urban monograde schools. Parent D said that multigrade teaching is very difficult. She gave this as one of the reasons why teacher absenteeism was high and suggested that the government should: "... pay the teachers double because they are teaching two grades at the same time." (Parent D)

Three of the teachers said that they felt teaching multigrade classes was an overload because they did the work of two teachers on their own. One student teacher, like one of the parents, suggested that: "... maybe multigrade teachers should be paid double money" (Student teacher H). Two of the teachers held a very strong perception that multigrade classes meant that the teacher had to manage a very large class consisting of children of different ages and grades and without resources or training for this kind of situation. They felt that the Department of Education was using them to solve the problem of insufficient schools and teachers. As Teacher F put it:

It is not fair that one teacher has to teach two classes as one. Different grades are supposed to be in different classes. But when the government cannot provide enough teachers, then you are asked to teach two or even three grades. So, the government has a problem and you the teacher are lumped with it. Sometimes the class is too large for one teacher to manage. How can a teacher teach well in such a situation? He ends up being a baby sitter just to manage the class. (Teacher F)

With the exception of one teacher who had been trained in multigrade methods, the other teachers in the multigrade schools interviewed said they were just coping with the demands of their classes mainly because they had received no training in how to teach children in multigrade settings. In contrast, the trained teacher said:

I am actually enjoying teaching multigrade. It has made me even more creative and I pass this on to the children. The children learn how to learn on their own. They also assist each other and they develop

good social skills. They learn responsibility and to become peer leaders and supporters. But I like it also because it allows me to give individual attention to the children who need it while those who know what they are doing carry on by themselves until I give them additional instructions. I actually find the children are very cooperative. (Teacher B)

The data show that the majority of those associated with multigrade schooling saw this as a pragmatic strategy rather than as a positive pedagogical choice. Respondents saw this as a way of managing small numbers of both students and teachers forced upon them by student urban drift and lack of availability of teachers. The lack of training in multigrade pedagogy reinforced perceptions of this as a second-rate strategy used to address resource short-falls.

#### *4.5 Stakeholders' Views and Perceptions about Teacher Training, Strategies and Resource Availability for Multigrade Teaching*

A problem that was pointed out by all the primary teachers interviewed was that their schools suffered from acute shortages of teaching and learning resources. Teachers emphasised that it was not possible to provide quality teaching without being given the basic resources and infrastructure. The shortages they mentioned included staffroom, classrooms, desks, textbooks, teaching and learning aids, chalkboards and even chalk. In one class where observations occurred the teacher used charcoal brought in by her children to write on the "board", which was just a section of the wall. There was no chalk duster and the teacher used a piece of old, rolled newspaper to clean the board.

The teachers identified further problems that they had been trained only to teach a class of one grade and their curriculum was designed for monograde classes. This latter problem was perceived as one of the greatest challenges they faced as they had to improvise strategies to cope with the situation in which they found themselves—one that was strange since they had neither expected it nor trained for it. Teacher A articulated this problem by describing her experience as a: "... swim or sink for survival situation. (Teacher A)

None of the schools surveyed had curriculum documents for multigrade teaching. All teachers were working from a centrally distributed monograde curriculum. Teacher E reflected her concern about this gap:

It seems in multigrade we have to work twice as hard just to teach. We have no syllabus and no curriculum and we are all the time having to improvise what we teach; but it has to follow the department's curriculum. And then we have no books, no resources; even chalk sometimes. (Teacher E)

Teacher D complained that it was unfair that a teacher in a monograde class was given a prepared curriculum to work from and yet the multigrade teacher was charged with the responsibility to improvise and modify the monograde curriculum by themselves to fit the multigrade class setting. Teacher D went on to explain:

This is like asking the multigrade teacher to do more than the monograde teacher and so the teacher should be paid twice or an allowance for this extra work; otherwise it is not fair. (She added) "... the other teachers think we are no good for the normal classes so we are given these difficult classes since we have no choice; we can't say no." (Teacher D)

Basic School B has one multigrade class consisting of 93 children in grades 4 and 5. The school has one teacher trained in multigrade. To cope with this, the principal timetabled grade 4 consisting of 52 children to be taught by the teacher in the morning and grade 5 made up of 41 children to be taught by the same teacher in the afternoon. In discussing this situation, the principal referred to it as multigrade, but the teachers talked about it as two classes of monograde. While this solved the teacher shortage in this school, it caused other problems for families. For example attending school only for a half day meant a number of children with working parents had to be at home by themselves for a considerable time throughout the day.

Only one of the four schools visited (Basic School B) had a teacher trained in multigrade actually teaching a multigrade class. In Basic School A, the trained multigrade teacher couldn't teach at all, because she had been promoted to the role of head teacher. That school needed several multigrade classes but could only have one because it did not have enough multigrade teachers. The principal's explanation included the following extract:

This school is attracting many children from the Boma (village) and so our enrolments are up. So we have combined grade 3 and 4 into one multigrade class but the class is too big; we have 70 children in it. We wanted grade 5 and 6 also combined but we couldn't. For a start, we have only one trained teacher and I have assigned her to grade 3 and 4; and if 5 and 6 were to be combined, the class would have over 100 children because we have over 50 in each of these grades. So this means an extra two teachers to teach grade 5 and 6 as single grades. (Principal A)

Basic primary school B, located in one of the villages had no trained teacher. The five grades at the school were combined into two classes, one comprising grades 1, 2 and 5 and the other grades 3 and 4. There was no evidence the state provided monograde curriculum was being used and there were very few resources the teacher could use. There were a few desks in each of the classroom and most children sat on the bare concrete floor. A section of the wall was being used as the blackboard but there was no chalk. Instead, the teacher relied on charcoal brought in by her or the children. There were four story books on the shelf that otherwise stood bare. The school did not have an electricity supply and classrooms depended on sunlight for their lighting. It was evident that the school had no learning materials, teaching aids or environment conducive to teaching or learning. The young teacher interviewed explained:

At this school, we are two teachers and the head teacher. He is away at [name]. None of us is a teacher.

We were lucky to get this job because they needed someone to look after the children. I finished year 10 and then I couldn't go on. So for two years I was doing nothing. Then I got this job. But we don't have many resources or anything at this school. We just use the little we have as well as we can. For my two grades I have only four reading books of different topics. So, I take one and read for the children, and then we talk about it. (Teacher E)

It was clear that the teacher put emphasis on developing the children's literacy abilities with a little attention to very basic arithmetic and other subjects. In addressing the lack of resources for multigrade it is necessary to place this in the context of the resourcing of schools in general. Our research showed that many schools faced a significant lack of resources for teaching of any sort. Teachers lacked books to use with students, and in some cases, desks, chalk, electricity, desks, paper and other materials that are basic necessities. There is evidence of schools which did not have trained teachers. Thus whilst those delivering multigrade classes mourned the lack of a multigrade curriculum to help guide them, there were other teachers working in contexts where even the monograde curriculum was not available, nor were there resources to help them manage educating a diverse range of students. Clearly a good understanding of multigrade pedagogy would help teachers such as Teacher E above, but this also needs to be supported by basic educational resources.

## 5. Conclusions and Recommendations

The widespread use of multigrade schooling in the Majority World has been, in recent years, supported by UNESCO and the African Region of the World Bank who have developed a 5 year multigrade capacity building programme to enhance teaching and learning in Sub-Saharan Africa (Juvane, 2005). In the Majority World more than 80% of the population live in rural areas and "over 80 million children in these countries are not enrolled in school and many more fail to attend regularly or to attain basic skills" (CREATE, 2010, p. 9). Those who do attend school are most likely to be educated in multigrade classes, not because there is a strong commitment to multigrade as a desirable educational practice, but because a lack of resources and teachers mean that combining children at different grade levels into one class is a practical strategy that enables children to access education in their local, rural/regional area. The alternative is to require children to migrate to cities where their numbers are sufficient to offer monograde classes. Multigrade education is thus positioned, in the eyes of participants in this study, as the less desirable choice forced on rural schools.

The demographics of low numbers of children at each grade level in rural areas cannot be changed: what can be changed is perceptions around the efficacy of multigrade schooling. There is evidence that well supported, high quality multigrade education could be the potential engine to drive the policy aim of providing Education for All (EFA). This is particularly so since it is estimated that if the Millennium Development Goal (MDG) Number 2, the MDG that calls for EFA, were to be achieved, 32% of primary school children in the Majority World would need to be enrolled in multigrade classes (Little, 2006b).

The current situation in Zambia (which we believe is reflected in many Majority World countries) is influenced by three factors. Firstly, schools in rural and remote areas have low enrolments which necessitate the combination of two or three grade levels as one class. Secondly, the schools have rather large classes due to lack of trained teachers to teach the combined grades. Thirdly, there is lack of supporting infrastructure. The combination of an amalgam of grades with many children taught by untrained teachers tends to commit these schools to poor educational quality. This perception encourages parents to send their children to monograde schools if they can afford these, or relocate to the cities where they are more likely to find monograde schools if that is possible for the family, thereby reinforcing the poor reputation of multigrade schools. Schools with multigrade classes thus tend to have high absentee rates and low retention rates. This is unfortunate given the difficulties children in the impoverished rural and remote areas have in accessing education. If Zambia is to meet the goal of EFA as envisaged in the United Nation's advocacy or to contribute towards the attainment of MDGs,

increased supply of multigrade education seems the most pragmatic approach but this needs to be coupled with a change in understanding in relation to multigrade pedagogy and a commitment to resourcing schools and teachers appropriately.

Such changes, we argue, need to originate at government level. As demonstrated by the findings presented in this paper, the lack of government support for multigrade is often perceived by teachers, parents and students as an indication that multigrade education is unimportant or not desirable, or at best only a poor substitute for “normal” monograde education. This stigma needs to be proactively addressed especially by governments in these countries if we are to narrow the gap between the Minority World and Majority World education perspectives.

Teachers’ perceptions of multigrade classes varied significantly mainly depending on their training. The teachers who had been trained in multigrade teaching saw teaching multigrade as a challenge that offers a lot of promise for the attainment of the goal of EFA. In contrast, teachers who had been given responsibility for a multigrade class without training felt they were burdened with a lot more work than a monograde teacher. It was clear that training in multigrade makes a difference. Those trained in multigrade not only realise how student-centred multigrade pedagogy can be but also become aware of its potential for a holistic development of the child focusing not only on metacognition but also social skills, such as cooperation, as well as cognitive development.

The present approach, which focuses on the supply of monograde teachers and the provision of curriculum and resources only designed for monograde education, exacerbates the challenges faced by teachers in multigrade settings. Similarly, the supply of untrained teachers to teach multigrade classes, (a situation characterised as the “sink or swim” situation by some of the interviewees) needs to be replaced by giving teachers access to a providential multigrade curriculum and supporting teachers by training and retraining in multigrade pedagogy and strategies. It needs to be understood that multigrade teaching is a specialised pedagogy with a demanding conceptual architecture which requires skilling, both through pre-service teacher education courses and professional in-service for teachers already in the field.

Current perceptions that teaching multigrade is “more work” than teaching monograde also need to be acknowledged. In rural and remote schools in Vietnam teachers were offered additional salary depending on how many grades were combined for their class (Pridmore & Son, 2006). Pridmore and Son argued that such an approach worked well, thus the idea is worth exploring in Zambia and other Majority World countries. It may also be possible to link this financial incentive to training in multigrade pedagogy for teachers currently practicing.

Research such as that from which this paper emerges needs to be extended so as to enhance our understanding of the effects of multigrade teaching on children’s learning outcomes, particularly in contexts where multigrade education is well resourced and supported, and delivered by teachers who understand, and are committed to, multigrade pedagogy. The challenge facing educators and educational policy designers across the Majority World is to realise the potential of multigrade schooling. Without an increase in the supply of multigrade schooling, the gap between supply and demand for primary schooling in the Majority World will only grow larger. Equally importantly, the gap between levels of education in the Minority and Majority World will widen. Consequently, the MDG goal of EFA by 2015 will remain nothing but a mirage on the horizon of education for millions of children, not only in Zambia and Africa but throughout other Majority World countries.

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